

Claims

1. An optical disc for adjusting an optical pickup comprising:
a first signal recording part that is irradiated with a laser beam from one surface side; and
a second signal recording part that is irradiated with the laser beam from the other surface side to record data so that a scanning direction by the laser beam is opposite to that of the first signal recording part.
2. The optical disc for adjusting an optical pickup according to claim 1, wherein a recording area provided in the first signal recording part and a recording area provided in the second signal recording part are provided at radial positions of the same distance from the center of the disc.
3. The optical disc for adjusting an optical pickup according to claim 1, wherein the recording area provided in the first signal recording part and the recording area provided in the second signal recording part are provided at radial positions having different distances from each other from the center of the disc.
4. The optical disc for adjusting an optical pickup according to claim 1, wherein in the first signal recording part, data is recorded so as to form a first spiral recording track, and in the second signal recording part, data is recorded so as to form a second recording track of a spiral shape in a direction opposite to that of the first recording track.
5. The optical disc for adjusting an optical pickup according to claim 1,

wherein the first recording track is formed from one side of the inner peripheral side or the outer peripheral side of the disc to the other side, and the second recording track is formed from the other side of the inner peripheral side or the outer peripheral side of the disc to one side.

6. The optical disc for adjusting an optical pickup according to claim 1, wherein in the first signal recording part, data is recorded so as to form a first concentric circular recording track, and in the second signal recording part, data is recorded so as to form a second concentric circular recording track in opposite order to that of the first recording track.

7. An adjusting method for an optical pickup comprising the steps of:

mounting and rotating an optical disc for adjusting the optical pickup including: a first signal recording part that is irradiated with a laser beam from one surface side; and a second signal recording part that is irradiated with the laser beam from the other surface side to record data so that a scanning direction by the laser beam is opposite to that of the first signal recording part;

then applying the laser beam to the signal recording part of the opposed side of the first and second signal recording parts of the adjusting optical disc from at least one of the first and second optical pickups respectively disposed to be opposed to the surfaces of the adjusting disc; and

detecting a reflected light from the opposed signal recording part to adjust the one optical pickup.

8. The adjusting method for an optical pickup according to claim 7, wherein in the method, an optical axis of a photodetector of one optical pickup is coarsely adjusted under an inoperative state of the focusing control and the tracking control of an objective lens of the one optical pickup.

9. The adjusting method for an optical pickup according to claim 8, wherein in the method, the focusing control is operative and the tracking control is inoperative, and the light source of the one optical pickup is moved to coarsely adjust an optical path from the light emitting point of the laser beam to the adjusting disc.

10. The adjusting method for an optical pickup according to claim 9, wherein in the method, while the focusing control and the tracking control are operative, the reflected light from the opposed signal recording part is detected to finely adjust the optical axis of the photodetector of the one optical pickup.

11. The adjusting method for an optical pickup according to claim 10, wherein in the method, the focusing control and the tracking control are operative, and the light source of the one optical pickup is moved to finely adjust the optical path from the light emitting point of the laser beam to the adjusting disc.

12. The adjusting method for an optical pickup according to claim 11, wherein in the method, the inclination of the optical axis from the objective lens of the one optical pickup is adjusted so that a jitter component of a signal obtained from the photodetector of the one optical pickup becomes minimum.

13. The adjusting method for an optical pickup according to claim 12, wherein in the method, the output level of the light source of the one optical pickup is adjusted so that the level of a signal formed in accordance with the signal obtained from the photodetector of the one optical pickup reaches an optimum value.

14. The adjusting method for an optical pickup according to claim 7, wherein in the method, after the adjustment of one optical pickup of the first and second optical pickups is completed, the other optical pickup is adjusted.

15. The adjusting method for an optical pickup according to claim 14, wherein in the method, an optical axis of a photodetector of the other optical pickup is coarsely adjusted under an inoperative state of the focusing control and the tracking control of an objective lens of the other optical pickup.

16. The adjusting method for an optical pickup according to claim 15, wherein in the method, the focusing control is operative and the tracking control is inoperative, and the light source of the other optical pickup is moved to coarsely adjust an optical path from the light emitting point of the laser beam to the adjusting disc.

17. The adjusting method for an optical pickup according to claim 16, wherein in the method, while the focusing control and the tracking control are operative, the reflected light from the opposed signal recording part is detected to finely adjust the optical axis of the photodetector of the other optical pickup.

18. The adjusting method for an optical pickup according to claim 17, wherein in the method, the focusing control and the tracking control are operative, and the light source of the other optical pickup is moved to finely adjust the optical path from the light emitting point of the laser beam to the adjusting disc.

19. The adjusting method for an optical pickup according to claim 18, wherein in the method, the inclination of the optical axis of the objective lens of the other optical pickup is adjusted so that a jitter component of a signal obtained from the photodetector of the other optical pickup becomes minimum.

20. The adjusting method for an optical pickup according to claim 19, wherein in the method, the output level of the light source of the one optical pickup is adjusted so that the level of a signal formed in accordance with the signal obtained from the photodetector of the other optical pickup reaches an optimum value.

21. The adjusting method for an optical pickup according to claim 7, wherein in the method, the first and second optical pickups are adjusted at the same time.

22. An adjusting device for an optical pickup comprising:

a rotating and driving mechanism for rotating and driving an optical disc for adjusting an optical pickup including: a first signal recording part that is irradiated with a laser beam from one surface side; and a second signal recording part that is irradiated with the laser beam from the other surface side to record data so that a scanning direction by the laser beam is opposite to that of the first signal

recording part; and

an adjusting mechanism part for applying the laser beam to the signal recording part of the opposed side of the first and second recording parts of the adjusting optical disc from at least one of first and second optical pickups respectively disposed to be opposed to the surfaces of the adjusting disc, and detecting a reflected light from the opposed signal recording part to adjust the one optical pickup.

23. The adjusting device for an optical pickup according to claim 22, further comprising a control part for controlling the operations of the first and second optical pickups, wherein the adjusting mechanism part includes a photodetector adjusting mechanism for adjusting an optical axis of a photodetector of the first or second optical pickup under an inoperative state of the focusing control and the tracking control of an objective lens of the one optical pickup by the control part.

24. The adjusting device for an optical pickup according to claim 23, wherein the adjusting mechanism part includes a light source adjusting mechanism for moving the light source of the first or the second optical pickup, while the focusing control is made operative and the tracking control is made inoperative by the control part, to adjust an optical path from the light emitting point of the laser beam to the adjusting disc.

25. The adjusting device for an optical pickup according to claim 24, wherein the adjusting mechanism part includes an objective lens adjusting mechanism part

for adjusting the inclination of the optical axis of the objective lens of the first or the second optical pickup so that a jitter component of a signal obtained from the photodetector of the first or the second optical pickup becomes minimum.

26. The adjusting device for an optical pickup according to claim 25, wherein the adjusting mechanism part includes an output control part for adjusting the output level of the light source of the first or the second optical pickup so that the level of a signal formed in accordance with the signal obtained from the photodetector of the first or the second optical pickup reaches an optimum value.